

LONDON- WEST MIDLANDS ENVIRONMENTAL STATEMENT

Volume 5 | Technical Appendices

CFA14 | Newton Purcell to Brackley

Baseline (SV-002-014)

Sound, noise and vibration

November 2013

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Department
for Transport

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1 Introduction

1.1 Structure of the sound, noise and vibration appendices

- 1.1.1 The sound, noise and vibration appendices comprise four sections. The first of these is an introduction to the relevant policy and methodology (Volume 5: Appendix SV-001-000). This relates to the sound, noise and vibration assessment for all community forum areas (CFA).
- 1.1.2 For the Newton Purcell to Brackley area, the other three sections are as follows:
- baseline sound, noise and vibration (Volume 5: Appendix SV-002-014) (this appendix);
 - construction sound, noise and vibration (Volume 5: Appendix SV-003-014); and
 - operational sound, noise and vibration (Volume 5: Appendix SV-004-014).
- 1.1.3 Maps referred to within this appendix are contained in the Volume 5, Sound, Noise and Vibration Map Book.
- 1.1.4 This appendix includes details of the existing and future baseline sound environment within the area. It provides details of measurements and any other data collection which has been undertaken in order to obtain existing and future baseline sound levels.

1.2 Existing acoustic environment

- 1.2.1 The soundscape in this area is varied, reflecting the mixture of larger settlements, villages, hamlets and isolated individual properties in the district.
- 1.2.2 The area includes Newton Purcell in the south and the village of Radstone in the north. The town of Brackley is situated to the north west of the area where the A43 runs approximately perpendicular to the Proposed Scheme. In addition to Newton Purcell and Radstone there are a number of other villages including Westbury, Mixbury and Turweston situated relatively close to the Proposed Scheme.
- 1.2.3 Turweston, lying in the northern region of the area, has a varied sound environment and includes sound from the A43, the local road network, occasional aircraft over flights, agricultural activities; and natural sounds. Daytime sound levels in this region are typically around 45 to 50dB¹.
- 1.2.4 The sound environment at Newton Purcell includes the sound of traffic from the A4421, a relatively busy road that runs through the village, and natural sounds. Daytime sound levels around Newton Purcell range from around 45 to 70dB depending on proximity to the A4421.

¹ Quoted dB values at residential areas refer to the free-field 16 hour daytime (07:00 to 23:00) equivalent continuous sound pressure level, $L_{pAeq,16hr}$.

- 1.2.5 At both Turweston and Newton Purcell, sound levels reduce during the night-time periods by around 5dB² as a result of reduced road traffic flows on main and local roads.
- 1.2.6 At the villages of Radstone and Mixbury and at isolated farmhouses within this area, a relatively quiet, natural soundscape predominates. The soundscape here is dominated by natural sounds, with intermittent sounds from agricultural activity. Occasional local road traffic and distant road traffic noise are also audible. In Radstone, sound levels are typically around 45dB over the daytime reducing to 35 to 40dB at night. In Mixbury, daytime and night-time sound levels are typically around 45dB and 40dB respectively..

² Night-time sound levels refer to the free-field 8 hour night-time (23:00 to 07:00) equivalent continuous sound pressure level, $L_{pAeq,8hr}$.

2 Scope, assumptions and limitations

2.1 Sound and vibration sensitive receptors

2.1.1 Within the Newton Purcell to Brackley area, 89 assessment locations have been defined to represent all identified sound and vibration sensitive receptors within the spatial scope. The assessment locations are shown on the Map Series SV-03 and SV-04 (Volume 5, Sound, Noise and Vibration Map Book). Within this area, sound and vibration sensitive receptors have been identified, including:

- residential areas;
- education facilities;
- community centres and meeting facilities;
- places of worship; and
- healthcare facilities.

2.2 Local engagement

2.2.1 Discussions have been held with representatives of Aylesbury Vale District Council, Cherwell District Council and South Northamptonshire District Council regarding the approach which has been taken to baseline monitoring within this area, the identification of noise and vibration sensitive receptors, the selection of assessment location and baseline sound levels at these assessment locations.

2.2.2 Changes suggested during these meetings have influenced the assessment locations used and the monitoring undertaken are reported in this document.

2.2.3 Representatives of Aylesbury Vale District Council and Cherwell District Council have also attended baseline sound measurements in this area or nearby CFA and witnessed the measurement procedures used.

2.2.4 Local engagement through community forum meetings has also provided the opportunity for local groups to suggest appropriate baseline sound monitoring locations. Any suggestions received from these groups have been considered and have influenced the monitoring undertaken and reported in this document.

2.3 Existing baseline sound monitoring locations

2.3.1 In some parts of this area, due to limited land access, baseline sound levels have been derived by means of extrapolation of sound levels measured at similar locations in the area.

2.3.2 Maps showing the baseline sound monitoring locations and assessment locations within this area are included in Map Series SV-03 and SV-04 (Volume 5, Sound, Noise and Vibration Map Book).

3 Environmental baseline

3.1 Existing baseline data collection methodology

- 3.1.1 The overall approach to baseline data collection for sound noise and vibration is described in Volume 5: Appendix SV-001-000.
- 3.1.2 Over the Newton Purcell to Brackley area, a large number of baseline sound measurements have been undertaken. These have been classified as follows:
- long-term measurements – unattended measurements of several days duration;
 - medium-term measurements – attended measurements of several hours duration (generally repeated at different times of day); and
 - short-term measurements – attended measurements typically of 30 minutes duration (generally repeated at different times of day).
- 3.1.3 In this CFA a total of 29 baseline sound level measurements have been undertaken.
- 3.1.4 In Newton Purcell, one long-term measurement was undertaken, supplemented by three short-term measurements from three different locations in the village where baseline sound levels were representative of those at surrounding properties.
- 3.1.5 Towards the north-east outskirts of Newton Purcell, a number of properties are located close to the Proposed Scheme. Measurements at three of these noise sensitive residential properties were undertaken.
- 3.1.6 Approximately 1 Km north of Newton Purcell, a single long - term measurement was undertaken at an isolated farm in a rural setting.
- 3.1.7 North of Newton Purcell, a single long-term measurement was undertaken at an isolated farm in a rural setting, approximately 1 Km from the village.
- 3.1.8 On the south-western outskirts of Finmere, a long-term measurement was undertaken at a noise sensitive property close to the A421 along with supplementary short-term measurements. A further long-term measurement location further west was also used to survey a property to the north of the A412 which is located in close proximity to Proposed Scheme.
- 3.1.9 In the areas surrounding Church Lane to the east of Mixbury, three long-term measurements were undertaken at three residential properties where baseline sound levels were representative of those at surrounding properties.
- 3.1.10 In Turweston, four long-term measurements were undertaken at various locations in the village where baseline sound levels were representative of those at surrounding properties, supplemented by two short-term measurements. Additional long-term measurements were also undertaken at two rural, isolated locations in close proximity to the Proposed Scheme, south of Turweston. A single long-term measurement was undertaken towards the north of Turweston, close to the A43.

3.1.11 In the village of Radstone, two long-term measurements were undertaken at locations where baseline sound levels were representative of those at surrounding properties. These were supplemented by two short-term measurements which were undertaken at two locations in Radstone.

3.1.12 A single long-term measurement was also undertaken at an isolated, rural property approximately 600m south of Radstone.

3.2 Existing baseline sound levels

3.2.1 From the measurements described in Section 3.1, baseline sound levels have been ascertained for each assessment location within this area. These levels are presented in terms of the following key sound indicators:

- For the operational sound assessment
 - $L_{pAeq,16hr}$ weekday daytime (07:00-23:00) sound pressure level;
 - $L_{pAeq,8hr}$ weekday night-time (23:00-07:00) sound pressure level;
 - arithmetic average of $L_{pAFmax,5min}$ night-time sound pressure level; and
 - highest $L_{pAFmax,5min}$ night-time sound pressure level.
- For the construction sound assessment
 - daytime L_{pAeq} sound pressure level (Monday to Friday 07:00-19:00; Saturday 07:00-13:00);
 - evening/weekend L_{pAeq} sound pressure level (Monday to Friday 19:00-23:00; Saturday 13:00- 23:00; Sunday 07:00 to 23:00); and
 - night-time L_{pAeq} sound pressure level (Monday to Sunday 23:00-07:00).

3.2.2 The values above are presented in Table 1. The data source coding included within this table details how the baseline sound levels allocated to each assessment location have been derived. This coding is summarised in Table 2 and explained in detail in Volume 5: Appendix SV-001-000.

Appendix SV-002-014

Table 1: Existing baseline sound levels

Assessment location ID	Area represented	Measurement location	Existing baseline sound level (dB)							Data source coding
			For operational sound assessment				For construction sound assessment			
			Daytime L _{pAeq,16hr}	Night-time L _{pAeq,8hr}	Arithmetic average of night-time L _{pAFmax,5min}	Highest night-time L _{pAFmax,5min}	Daytime L _{pAeq}	Evening/weekend L _{pAeq}	Night-time L _{pAeq}	
266177	John Clare Close, Brackley	CS2105	58.4	54.3	64.2	76.6	58.8	56.4	54.4	1,A,ii,b
266596	Radstone, Brackley	CS4102	47.4	39.2	49.9	74.5	48.0	45.2	39.2	1,C,ii,b
266631	Radstone, Brackley	CS4102	54.8	46.0	49.9	74.5	55.4	52.6	44.0	1,A,i,a
267247	South Bank, Turweston	CS1020	50.8	42.9	52.8	68.4	51.3	49.0	42.3	1,A,ii,b
268637	Main Street, Turweston	CS0010	46.6	38.7	52.2	67.9	47.9	45.6	38.9	3,A,iii,b
268683	Chapel Lane, Turweston	CS0010	46.6	38.7	52.2	67.9	47.9	45.6	38.9	3,A,ii,b
270056	Turweston, Brackley	CS2105	58.4	54.3	64.2	76.6	58.8	56.4	54.4	1,A,ii,b
270079	Northampton Road, Brackley	CS2105	58.4	54.3	64.2	76.6	58.8	56.4	54.4	1,A,i,a
270561	Radstone, Brackley	CS1302	42.2	37.0	43.4	64.7	43.2	44.3	36.3	1,A,ii,b
273397	Radstone, Brackley	CS4104	44.9	38.0	42.9	63.1	46.2	45.5	38.0	1,A,ii,b
273418	Radstone, Brackley	CS0006	60.1	28.2	32.9	53.1	61.4	60.7	31.4	3,A,ii,b
273468	Radstone, Brackley	CS1302	42.2	37.0	43.4	64.7	43.2	44.3	36.3	1,A,ii,b
273483	Unnamed Road, Radstone	CS1302	42.2	37.0	43.4	64.7	43.2	44.3	36.3	1,A,i,a
273513	Radstone, Brackley	CS1302	42.2	37.0	43.4	64.7	43.2	44.3	36.3	1,A,i,a
273532	Radstone, Brackley	CS1302	42.2	37.0	43.4	64.7	43.2	44.3	36.3	1,A,i,a

Assessment location ID	Area represented	Measurement location	Existing baseline sound level (dB)							Data source coding
			For operational sound assessment				For construction sound assessment			
			Daytime L _{pAeq,16hr}	Night-time L _{pAeq,8hr}	Arithmetic average of night-time L _{pAFmax,5min}	Highest night-time L _{pAFmax,5min}	Daytime L _{pAeq}	Evening/weekend L _{pAeq}	Night-time L _{pAeq}	
273535	Radstone, Brackley	CS0005	49.2	42.3	53.7	73.9	50.5	49.8	42.3	3,A,ii,b
273549	Radstone, Brackley	CS0005	49.2	42.3	53.7	73.9	50.5	49.8	42.3	3,A,ii,b
273561	Radstone, Brackley	CS0005	49.2	42.3	53.7	73.9	50.5	49.8	42.3	3,A,ii,b
273586	Radstone, Brackley	CS1302	42.2	37.0	43.4	64.7	43.2	44.3	36.3	1,A,iii,b
275510	Church Lane, Mixbury	CS0104	49.3	40.8	48.1	63.8	50.3	46.1	40.4	1,A,i,a
275606	Banbury Road, Finmere	CS3007	58.1	52.1	83.0	88.9	58.6	57.7	51.8	1,BC,ii,b
275991	Mixbury, Brackley	CS4103	46.1	41.1	47.2	62.4	46.9	45.1	40.1	1,A,ii,b
276471	Church View, Mixbury	CS4103	46.1	41.1	47.2	62.4	46.9	45.1	40.1	1,A,ii,b
276513	Evenley Road, Mixbury	CS4103	46.1	41.1	47.2	62.4	46.9	45.1	40.1	1,A,ii,b
276541	Church Lane, Mixbury	CS4103	46.1	41.1	47.2	62.4	46.9	45.1	40.1	1,A,ii,b
276587	Mixbury, Brackley	CS4103	46.1	41.1	47.2	62.4	46.9	45.1	40.1	1,A,ii,b
276675	Mixbury, Brackley	CS4103	46.1	41.1	47.2	62.4	46.9	45.1	40.1	1,A,ii,b
276694	Mixbury, Brackley	CS0101	48.8	46.7	55.7	70.8	49.5	49.8	46.2	1,A,iii,b
276761	Fulwell Lane, Mixbury	CS0101	48.8	46.7	55.7	70.8	49.5	49.8	46.2	1,A,iii,b
276781	Mixbury, Brackley	CS1024	46.4	41.5	48.1	67.4	47.2	45.0	40.2	1,A,i,a
276837	Mixbury, Brackley	CS4103	46.1	41.1	47.2	62.4	46.9	45.1	40.1	1,A,i,a

Assessment location ID	Area represented	Measurement location	Existing baseline sound level (dB)							Data source coding
			For operational sound assessment				For construction sound assessment			
			Daytime L _{pAeq,16hr}	Night-time L _{pAeq,8hr}	Arithmetic average of night-time L _{pAFmax,5min}	Highest night-time L _{pAFmax,5min}	Daytime L _{pAeq}	Evening/weekend L _{pAeq}	Night-time L _{pAeq}	
276848	Mixbury, Brackley	CS4103	46.1	41.1	47.2	62.4	46.9	45.1	40.1	1,A,ii,b
276941	Newton Purcell, Buckingham	CS1205	45.6	41.0	50.8	63.8	46.2	44.1	40.8	1,A,ii,b
276979	Unnamed Road, Newton Purcell With Shelswell	CS3005	71.4	68.0	83.1	89.7	71.7	72.5	67.4	3,A,ii,b
276994	Unnamed Road, Newton Purcell With Shelswell	cs0071	44.9	39.4	49.0	55.6	45.7	46.5	38.8	3,A,ii,b
277041	Newton Purcell, Buckingham	CS3005	61.4	58.0	83.1	89.7	61.7	62.5	57.4	3,B,ii,b
277059	Newton Purcell, Buckingham	CS3005	61.4	58.0	83.1	89.7	61.7	62.5	57.4	3,B,ii,b
277073	Newton Purcell, Buckingham	CS3005	66.4	63.0	83.1	89.7	66.7	67.5	62.4	3,B,ii,b
277167	Newton Purcell, Buckingham	CS0071	44.9	39.4	49.0	55.6	45.7	46.5	38.8	3,A,ii,b
277188	Newton Purcell, Buckingham	CS1205	45.6	41.0	50.8	63.8	46.2	44.1	40.8	1,A,ii,b
277206	A4421, Newton Purcell	CS0084	59.3	53.6	67.8	74.4	60.1	60.9	53.5	1,A,i,a
277221	Newton Purcell, Buckingham	CS0084	54.3	48.6	67.8	74.4	55.1	55.9	48.5	1,B,ii,b
277239	Newton Purcell, Buckingham	CS0084	54.3	48.6	67.8	74.4	55.1	55.9	48.5	1,B,ii,b
277261	Newton Purcell, Buckingham	CS0070	65.6	60.0	75.1	84.1	66.1	64.6	59.5	1,A,ii,b
277266	Newton Purcell, Buckingham	CS0084	59.3	53.6	67.8	74.4	60.1	60.9	53.5	1,A,ii,b
277272	A4421, Newton Purcell With Shelswell	CS0040	49.7	44.9	53.9	67.1	50.2	50.5	45.3	1,A,ii,b
277315	Banbury Road, Finmere	CS0101	45.9	43.5	55.7	70.8	46.3	46.6	43.0	1,D,ii,b

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			Daytime L _{pAeq,16hr}	Night-time L _{pAeq,8hr}	Arithmetic average of night-time L _{pAFmax,5min}	Highest night-time L _{pAFmax,5min}	Daytime L _{pAeq}	Evening/weekend L _{pAeq}	Night-time L _{pAeq}	
277403	Banbury Road, Finmere	CS0101	48.8	46.7	55.7	70.8	49.5	49.8	46.2	1,A,ii,b
277496	Banbury Road, Finmere	CS0101	48.8	46.7	55.7	70.8	49.5	49.8	46.2	1,A,i,a
277548	Fulwell, Brackley	CS0104	49.3	40.8	48.1	63.8	50.3	46.1	40.4	1,A,iii,b
277630	Fulwell, Brackley	CS0104	49.3	40.8	48.1	63.8	50.3	46.1	40.4	1,A,iii,b
277959	Newton Purcell, Buckingham	CS0040	49.7	44.9	53.9	67.1	50.2	50.5	45.3	1,A,i,a
278675	Banbury Road, Finmere	CS3007	70.6	64.6	83.0	88.9	71.1	70.2	64.3	1,C,ii,b
278708	A421, Finmere	CS3008	48.7	36.7	39.1	45.1	49.2	48.3	36.6	3,A,ii,b
279188	Banbury Road, Finmere	CS0101	48.8	46.7	55.7	70.8	49.5	49.8	46.2	1,A,ii,b
279198	Banbury Road, Finmere	CS0101	48.8	46.7	55.7	70.8	49.5	49.8	46.2	1,A,ii,b
279895	Turweston, Brackley	CS6201	52.1	45.0	51.1	63.2	52.9	46.5	44.8	1,A,ii,b
280457	Turweston, Brackley	CS0085	51.9	46.9	55.0	71.6	52.5	51.0	46.7	1,A,i,a
280564	Main Street, Turweston	CS2107	48.1	46.2	49.0	71.5	48.5	47.2	46.0	1,A,ii,b
280584	Turweston, Brackley	CS4105	49.0	48.4	46.7	73.7	49.4	52.6	48.7	1,A,i,a
280717	Unnamed Road, Turweston	CS1019	46.8	43.1	47.8	68.8	47.4	46.4	42.8	1,A,ii,b
280726	Turweston, Brackley	CS2107	48.1	46.2	49.0	71.5	48.5	47.2	46.0	1,A,ii,b
280734	The Green, Turweston	CS1019	46.8	43.1	47.8	68.8	47.4	46.4	42.8	1,A,ii,b

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			Daytime L _{pAeq,16hr}	Night-time L _{pAeq,8hr}	Arithmetic average of night-time L _{pAFmax,5min}	Highest night-time L _{pAFmax,5min}	Daytime L _{pAeq}	Evening/weekend L _{pAeq}	Night-time L _{pAeq}	
280761	Turweston, Brackley	CS0079	46.8	41.3	47.0	68.0	47.7	44.1	41.0	1,A,ii,b
280811	Main Street, Turweston	CS1020	50.8	42.9	52.8	68.4	51.3	49.0	42.3	1,A,ii,b
280902	Turweston, Brackley	CS1020	50.8	42.9	52.8	68.4	51.3	49.0	42.3	1,A,ii,b
280949	Turweston, Brackley	CS0079	46.8	41.3	47.0	68.0	47.7	44.1	41.0	1,A,iii,b
281018	Turweston, Brackley	CS0079	46.8	41.3	47.0	68.0	47.7	44.1	41.0	1,A,iii,b
281078	Turweston, Brackley	CS0079	46.8	41.3	47.0	68.0	47.7	44.1	41.0	1,A,iii,b
281109	Turweston, Brackley	CS4105	49.0	48.4	46.7	73.7	49.4	52.6	48.7	1,A,ii,b
281175	Turweston, Brackley	CS4105	49.0	48.4	46.7	73.7	49.4	52.6	48.7	1,A,ii,b
281182	Turweston Road, Turweston	CS4105	49.0	48.4	46.7	73.7	49.4	52.6	48.7	1,A,ii,b
281733	Mill Lane, Westbury	CS0104	49.3	40.8	48.1	63.8	50.3	46.1	40.4	1,A,iii,b
281804	Brackley Road, Westbury	CS0104	49.3	40.8	48.1	63.8	50.3	46.1	40.4	1,A,iii,b
281858	Westbury, Brackley	CS0085	51.9	46.9	55.0	71.6	52.5	51.0	46.7	1,A,ii,b
281938	Turweston, Brackley	CS0079	46.8	41.3	47.0	68.0	47.7	44.1	41.0	1,A,iii,b
282022	Turweston, Brackley	CS0085	51.9	46.9	55.0	71.6	52.5	51.0	46.7	1,A,ii,b
282403	Mill Lane, Westbury	CS0104	49.3	40.8	48.1	63.8	50.3	46.1	40.4	1,A,iii,b
282953	Orchard Place, Westbury	CS0104	49.3	40.8	48.1	63.8	50.3	46.1	40.4	1,A,iii,b

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			For operational sound assessment				For construction sound assessment			
			Daytime L _{pAeq,16hr}	Night-time L _{pAeq,8hr}	Arithmetic average of night-time L _{pAFmax,5min}	Highest night-time L _{pAFmax,5min}	Daytime L _{pAeq}	Evening/weekend L _{pAeq}	Night-time L _{pAeq}	
283304	Brackley Road, Westbury	CS0104	49.3	40.8	48.1	63.8	50.3	46.1	40.4	1,A,iii,b
700432	Turweston Road, Brackley	CS2105	58.4	54.3	64.2	76.6	58.8	56.4	54.4	1,A,ii,b
700433	The Avenue, Whitfield	CS2105	58.4	54.3	64.2	76.6	58.8	56.4	54.4	1,A,ii,b
700434	Chapel Lane, Whitfield	CS2105	58.4	54.3	64.2	76.6	58.8	56.4	54.4	1,A,iii,b
700474	Turweston, Brackley	CS1020	50.8	42.9	52.8	68.4	51.3	49.0	42.3	1,A,i,a
711002	Committed Development C252-SN13	CS2105	53.5	49.4	64.2	76.6	53.9	51.5	49.5	1,C,iii,b
711005	Committed Development C252-SN46	CS2105	58.4	54.3	64.2	76.6	58.8	56.4	54.4	1,A,iii,b
711013	Whitfield Race Course	CS2105	50.2	46.1	64.2	76.6	50.6	48.2	46.2	1,C,ii,b
711026	Committed Development C252-SN23	CS4102	54.8	46.0	49.9	74.5	55.4	52.6	44.0	1,A,ii,b
720301	Northampton Road, Brackley	CS2105	58.4	54.3	64.2	76.6	58.8	56.4	54.4	1,A,ii,b

Table 2: Data source coding key

Code	Data source type
1	Long-term measurement location
2	Short-term (linked to simultaneous long-term)
3	Short-term (using profile from non-simultaneous long-term)
4	Short-term using standard (National Noise Incidence Study ³ or other) 24hr profile
5	Specific validated prediction
6	Predictions from other sources (Department of Environment, Food and Rural Affairs (Defra) noise maps ⁴ , etc.)
7	Generic levels

Code	Corrections applied
A	Data from above source applied directly
B	Correction applied for screening
C	Correction applied for distance from source
D	Minimum level cut-off applied

Code	Distance from measurement
i	Data applied from a measurement at or very close to the assessment location.
ii	Data applied from a local measurement location at a greater distance but noted to have equivalent acoustic climate.
iii	Data applied from a distant measurement location where sound levels would be expected to be similar.

Code	Uncertainty
a	Data are considered highly representative of the prevailing sound climate.
b	Data are considered representative of the prevailing sound climate, but variations in measured levels indicate that there may be a higher degree of uncertainty than for (a).
c	Data are considered to be an estimate of the sound climate, (e.g. taken from Defra noise maps, etc.).

³ Building Research Establishment (2002), *National Noise Incidence Study*, 2000/2001.

⁴ Defra; Noise Mapping England; <http://services.defra.gov.uk/wps/portal/noise/>; Accessed: 26 July 2013.

3.3 Future baseline methodology

Construction

- 3.3.1 The assessment of noise from construction activities assumes a baseline year of 2017. As a conservative assumption, it has been assumed that no change in baseline sound levels will occur between the existing baseline (2012/13) and the future baseline year of 2017.
- 3.3.2 Due to the duration of the construction work and as the precise timing of the highest sound levels would be different in each location, using baseline sound levels for 2017 as the start of the construction period, provides a reasonable worst case assessment.
- 3.3.3 The assessment of construction traffic is based on future baseline traffic flows for 2021, as a year representative of the middle of the construction period.

Operation

- 3.3.4 There is potential for future baseline sound levels for operation (2026) to change when compared to the existing baseline sound levels (2012) as a result of changes in baseline sound sources.
- 3.3.5 In the vast majority of cases where change might occur it is expected that baseline sound levels will increase at assessment locations due to increases in vehicle movements on roads. It is therefore considered that the use of the 2012 baseline levels in the operational assessment will result in a worst case assessment of the impact of changes in the future baseline sound levels in the majority of locations.
- 3.3.6 Therefore, for the purposes of this assessment, future baseline levels have been assumed to be identical to those identified in Table 1 of this appendix for 2012.
- 3.3.7 In addition, based on available road traffic information a screening exercise has been undertaken to identify any areas in which a reduction in baseline sound level might be likely. No reductions in baseline sound level have been identified; however, an increase in baseline noise levels has been predicted at the locations shown in Table 3 due to increased future traffic flows.

Table 3: Future baseline noise levels

Assessment Location	Road	Predicted increase in Basic Noise Level
277266	A4421 Buckingham Road	+0.8 dB
277206		
277221		
277239		
276941		
277496	A421 London Road	+0.8 dB
277403		
281733	A422 Brackley Road	+1.6 dB
282403		

4 References

Building Research Establishment (2002), *National Noise Incidence Study*, 2000/2001.

Defra; Noise Mapping England; <http://services.defra.gov.uk/wps/portal/noise/>; Accessed: 26 July 2013.